

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2005/006710

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 F28G1/16 F28G15/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F28G F23J F22B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 02, 26 February 1999 (1999-02-26) & JP 10 306912 A (MITSUBISHI HEAVY IND LTD), 17 November 1998 (1998-11-17)	1,2, 10-13, 19-25
Y	abstract; figures 1-4,9 -----	3-5,7,18
X	GB 1 084 342 A (MCCLELLAND WILSON) 20 September 1967 (1967-09-20)	26-28, 30,32-37
Y	page 1, line 49 - page 2, line 38; figures 1,3 -----	29,31
X	US 3 418 680 A (RAUSCH DAVID A) 31 December 1968 (1968-12-31)	38-42, 45-54, 56-59, 61,62
Y	column 2, line 66 - column 3, line 47 column 5, lines 23-50; figure 3 -----	44,55,60
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

Date of the actual completion of the international search

27 June 2005

Date of mailing of the international search report

05/07/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Leclaire, T

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2005/006710

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 15 26 138 B1 (DIAMOND POWER SPECIALITY) 16 September 1971 (1971-09-16) column 3, lines 12-34; figure 4 -----	4, 29, 38
Y	GB 2 048 806 A (JENKNER E) 17 December 1980 (1980-12-17) the whole document -----	3, 38
Y	DE 295 05 936 U1 (JARESCH U. WEGENER INHABER DIRK JARESCH, 44867 BOCHUM, DE) 9 November 1995 (1995-11-09) figures 2, 4 -----	18, 31, 55, 60
Y	PATENT ABSTRACTS OF JAPAN vol. 007, no. 025 (M-190), 2 February 1983 (1983-02-02) & JP 57 182013 A (MITSUBISHI JUKOGYO KK), 9 November 1982 (1982-11-09) abstract; figure 5 -----	5, 7, 44

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2005/006710

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 10306912	A	17-11-1998	NONE	
GB 1084342	A		NONE	
US 3418680	A	31-12-1968	DE 1751105 A1 FR 1557596 A GB 1169665 A	09-07-1970 14-02-1969 05-11-1969
DE 1526138	B1	16-09-1971	BE 686547 A GB 1137955 A GB 1137956 A GB 1137957 A GB 1137954 A SE 341233 B US 3439376 A US 3585673 A	15-02-1967 27-12-1968 27-12-1968 27-12-1968 27-12-1968 20-12-1971 22-04-1969 22-06-1971
GB 2048806	A	17-12-1980	DE 2931697 A1 DE 3003029 A1 ES 246714 Y US 4362108 A	20-11-1980 30-07-1981 16-09-1980 07-12-1982
DE 29505936	U1	09-11-1995	NONE	
JP 57182013	A	09-11-1982	NONE	